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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/586,041

07/13/2006

Johannes Arnoldus Jansen

207,623

9317

38137 7590 07/27/2009
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EXAMINER

BOWMAN, ANDREW J

ART UNIT

PAPER NUMBER

1792

MAIL DATE

DELIVERY MODE

07/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/586,041	Applicant(s) JANSEN ET AL.	
	Examiner ANDREW BOWMAN	Art Unit 1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 9-12, 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/11/09</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-8 and 13, in the reply filed on 5/7/09 is acknowledged. The examiner acknowledges the addition of claims 13-15. As such claims 1-15 remain pending in the current application, with claims 9-12, 14, and 15 being withdrawn.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

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not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, and 4-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotell et al. (WO 04/22513) in view of Antonov et al. (Laser Modification of Biocompatible Calcium Phosphate Coatings, *Lasers in Life Sciences*, 2000, Vol. 9, pp.127-142).

1. Regarding claims 1, 2, and 4-7, Cotell teaches that it is known to provide polymeric materials (claim 13) with an amorphous calcium phosphate coating (claim 5 and pg. 14, lines 20-27) while simultaneously crystallizing the laser deposited (pg. 7, lines 10-16) coating using an ArF laser (pg. 14, line 36 through pg. 15, line 2), wherein the energy of the laser is 1-500 mJ/cm² (pg. 14, line 20 through pg. 15, line 2). Cotell is silent regarding the particular wavelength of light used. However, Antonov shows that it is well-known that when crystallizing amorphous calcium/phosphorus type coatings over medical devices to be used inside the body, a wavelength of 300-200nm is commonly used. Further it can be shown from Table I of Antonov that lower wavelengths of light can be used on thinner coatings due to the fact that the penetration depths of lower wavelengths of light are lower. It is the position of the examiner that because the coating process of Cotell is in-situ (meaning that the laser-assisted crystallization is occurring while the coating is being added), then the coating thickness that was being annealed at one time would be less, making it obvious for one of ordinary skill in the art to use a lower wavelength of light to crystallize the coating based on the data of

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Antonov. One of ordinary skill in the art would be motivated to do so because 1) the lower wavelengths of light are less dangerous to people (i.e. ultraviolet and near ultraviolet as opposed to x-rays) and 2) are more easily generated and at much less cost, effectively making the processing safer and less expensive.

2. Regarding claim 8, it is the position of the examiner that the position of the laser of Cotell would be controlled (i.e. it would not just be placed at random) and the process of Cotell in view of Antonov would inherently create a "pattern of crystallization".

3. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotell et al. (WO 04/22513) in view of Antonov et al. (Laser Modification of Biocompatible Calcium Phosphate Coatings, *Lasers in Life Sciences*, 2000, Vol. 9, pp.127-142) and further in view of Li et al. (USPGPub 2002/0156529).

a. Regarding claims 3 and 13, the teachings of Cotell in view of Antonov are as shown above. Cotell in view of Antonov fails to teach wherein the substrate consists of one of the materials listed in the claims. However, Li shows that it is well-known to deposit similar calcium/phosphorus type coatings (paragraph [0053]) on polyethylene (paragraph [0057]). One of ordinary skill in the art would be motivated to use the polyethylene of Li in the invention of Cotell in view of Antonov because Li shows that polyethylene is a suitable material for the same types of coating to be used inside the body for similar purposes. Further, it is the position of the examiner that based on the methodologies of Cotell in view of Antonov and the known chemical and physical properties of polyethylene, one of

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ordinary skill in the art would expect a very high degree of success from such a combination.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANDREW BOWMAN whose telephone number is (571)270-5342. The examiner can normally be reached on Monday through Friday (7:30 to 5:00)EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571-272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art Unit 1792

Andrew J Bowman
Examiner
Art Unit 1792
